REMARKS

Applicant canceled claims 27 and 33 and added new claims 39-52. Claims 26, 28-32, and 34-52 are presented for examination.

The Examiner rejected claims 26, 28-32 and 34-38 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,248,305 (Zdrahala). Applicant amended independent claim 26 to include the features of canceled claim 27, which the Examiner indicated as allowable. Therefore, the rejection under 35 U.S.C. §103(a) should be withdrawn.

Under the judicially created doctrine of obviousness-type double patenting, the Examiner rejected claims 26-38 as being unpatentable over claims 26-38 of U.S. Patent No. 5,270,086, and provisionally rejected claims 26-38 as being unpatentable over claims 26-50 of copending application U.S. Application No. 08/907,170. Applicant intends to file an appropriate terminal disclaimer upon an indication that the claims are otherwise patentable.

New claims 39-43 require a balloon having a first extruded layer comprising liquid crystal polymer, and a burst pressure greater than seven atmospheres. New claims 44-52 are directed to a method including extruding a tube comprising a first layer comprising liquid crystal polymer, and forming the tube into a balloon. The cited references do not disclose or suggest the claimed subject matter.

Accordingly, Applicant believes that the claims are in condition for allowance, which action is requested.

Attached is a marked-up version of the changes being made by the current response. Enclosed is a Petition for Extension of Time and the fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Tu N. Nguyen
Reg. No. 42,934

Fish & Richardson P.C.
225 Franklin Street
Boston, Massachusetts 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

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Version with markings to sh w changes made

In the claims:

Claims 27 and 33 have been cancelled.

Claim 26 has been amended as follows:

26. (Twice Amended) A medical balloon catheter comprising an inflatably expandable balloon configured to be attached to a catheter, the balloon having an extruded layer comprising liquid crystal polymer (LCP), wherein the balloon has a radial expansion less than about 10 percent when inflated to seven atmospheres.

Pending Claims

26. (Twice Amended) A medical balloon catheter comprising an inflatably expandable balloon configured to be attached to a catheter, the balloon having an extruded layer comprising liquid crystal polymer (LCP), wherein the balloon has a radial expansion less than about 10 percent when inflated to seven atmospheres.

28. The medical balloon catheter of claim 26 wherein the extruded layer is biaxially oriented.

29. The medical balloon catheter of claim 26 wherein the extruded layer consists essentially of liquid crystal polymer (LCP).

30. The medical balloon catheter of claim 26 further comprising a second extruded layer comprising a polymeric material different from that of the first-mentioned layer.

31. The medical balloon catheter of claim 30 wherein the first layer consists essentially of liquid crystal polymer (LCP).

32. The medical balloon catheter of claim 30 wherein the balloon is the product of coextruding the first-mentioned and second layers.

34. The medical balloon catheter of claim 30 wherein the first layer is biaxially oriented.

35. The medical balloon of claim 30 wherein the second layer is an adhesion layer.

36. The medical balloon of claim 35 wherein the adhesion layer is disposed toward the interior of the balloon relative to the first layer, which is disposed toward the exterior.

37. The medical balloon of claim 30 comprising a third layer.

38. The medical balloon of claim 37 wherein the third layer enhances lubricity and is disposed towards the exterior of the balloon relative to the first and second layers.

39. The medical balloon catheter of claim 26, wherein the balloon has a radial expansion not exceeding three percent when inflated to seven atmospheres.

40. A medical balloon catheter comprising an inflatably expandable balloon configured to be carried by a catheter, the balloon having a first extruded layer comprising liquid crystal polymer, and a burst pressure greater than seven atmospheres.

41. The medical balloon catheter of claim 40, wherein the balloon has a second extruded layer comprising a polymeric material different from that of the first layer.

42. The medical balloon catheter of claim 40, wherein the first layer is biaxially oriented.

43. The medical balloon catheter of claim 40, wherein the second layer is disposed toward the interior of the balloon relative to the first layer.

44. A method of making a medical balloon catheter, the method comprising:
extruding a tube comprising a first layer comprising liquid crystal polymer; and
forming the tube into a balloon.

45. The method of claim 44, wherein the first layer consists essentially of liquid crystal polymer.

46. The method of claim 44, comprising co-extruding a second layer with the first layer, the second layer comprising a polymeric material different from that in the first layer.

47. The method of claim 46, comprising disposing the second layer towards the interior of the balloon relative to the first layer.

48. The method of claim 46, comprising co-extruding a third layer disposed towards an exterior of the balloon relative to the first and second layers, the third layer enhancing the lubricity of the balloon.

49. The method of claim 44, comprising biaxially orienting the first layer.

50. The method of claim 44, comprising blow molding the tube into the balloon.

51. The method of claim 44, comprising bonding the balloon to a catheter body.

52. A medical balloon catheter formed by the method of claim 44.